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ARIZONA STATE UNIVERSITY ■ COLLEGE OF BUSINESS
CENTER FOR BUSINESS RESEARCH

Quarterly Economic Forecast Update

'87 Likely To Be Fifth Year of Expansion

Since mid-1984, when the rapid recovery from the 1981-82 recession moderated, economic performance in Arizona, at least in the metropolitan areas, has continued to exceed historic norms. Nationally, however, economic growth has struggled to match its long-term average.

National economic growth frequently has been underestimated and the figures subsequently revised, since the transition to a mature expansion in 1984. These early indications of sluggish growth have helped to foster a generally pessimistic attitude concerning economic health, particularly among economic and financial analysts. Yet, except during second quarter 1986, the Gross National Product (GNP) has expanded at 2 to 4 percent annual rates, not far from the 3 percent long-term average.

A negative attitude toward the country's economic performance is easy to explain. The nation still has not fully recovered from the two recessions between 1980 and 1982, as evidenced by a high and steady 7 percent unemployment rate. Further, the trade and budget deficits have created additional problems, including unusually uneven conditions by sector.

Despite these issues, the current economic cycle can be viewed positively. Near-average growth for an extended period is an accomplishment, especially without rising inflation and interest rates. Late in 1987, the current expansion should break the peacetime record length of 58

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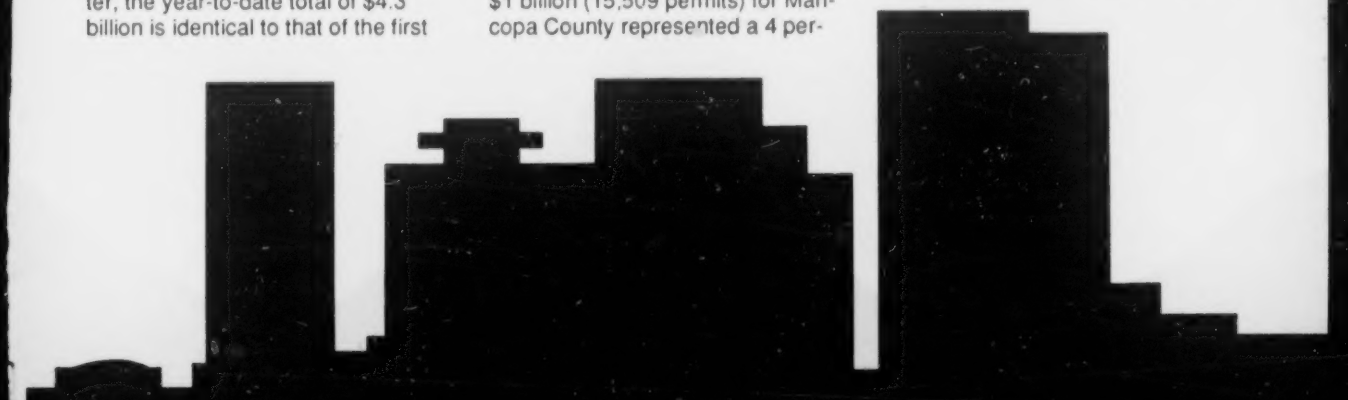
Third Quarter Construction Report

Activity Slows, Led By Commercial, Industrial

Although all major sectors recorded declines during the third quarter from second quarter levels, the Arizona construction industry is well on its way to achieving another good year. With $1.4 billion in total construction permits for the third quarter, the year-to-date total of $4.3 billion is identical to that of the first three quarters of 1985. Unlike the last few years, when the apartment and office building sectors led industry activity, the residential sector has been the fundamental area of activity during 1986.

Although the third quarter total of $1 billion (15,509 permits) for Maricopa County represented a 4 percent decrease from the dollar value of second quarter permits, the county continued to be the location for more than 70 percent of the state's recorded construction activity.

See "Construction," page 6



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months, set in the late 1970s. The experience of the 1980s may be preferable to the inflation-plagued booms of the early and late 1970s, which crashed into severe recessions.

The recessionary fears frequently expressed during the last two years have had little basis in the economic facts. While conditions could be better than they are, they easily could be far worse.

1987 NATIONAL FORECAST

The outlook, at an aggregate level, is for more of the same: GNP growth near 3 percent (see Table 1). However, the contributions of various segments of the economy will continue to vary.

The GNP comprises several components: personal consumption expenditures, non-residential fixed investment, residential fixed investment, net exports, government purchases, and change in business inventories. An analysis of these components reveals that economic growth has been variously stimulated and held back during the course of the expansion.

Slowing of the rapid growth that follows a recession is typical. Thus, the level of consumer expenditures, which account for nearly two-thirds of GNP, noticeably dropped in 1984. This decrease was accompanied by a swing in business inventories from a growth contributor to a detractor.

In 1985, a decline in non-residential fixed investment contributed to the slower economy but was partially offset by more residential activity and a higher level of government purchases. Non-residential activity slowed further in 1986, and government purchases dropped. Yet economic growth remained near 3 percent because of greater consumer expenditures and a more stable inventory situation.

The component so frequently in the news during the last year or two -- the trade deficit – did not provoke the slowdown in 1984. Trade has been a significant drag on the economy throughout the expansion, but its impact was worse in 1983-84 than in 1985-86.

Control Forecast

While GNP probably will rise as fast in 1987 as in 1985 and 1986, the contributions of its components will swing again. With low savings rates, consumer spending almost certainly will drop back, nearing 1984-85 levels. Non-residential investment will remain a drag on the economy due to overbuilding, excess industrial capacity and the new tax laws. Residential investment probably will moderate.

These distressing developments should be neutralized by an improving trade situation. Even if the trade deficit does not shrink but merely stops expanding, the economy will receive a tremendous boost. In recent months, although still severely out of balance, imports declined while exports increased.

Alternative Scenarios

While the chance of a recession beginning during 1987 is minimal, subpar growth is a threat. A near-average growth scenario is predicated on an improvement in trade that, in turn, will boost industrial production. It still is too early to confidently state that the long-sought turnaround in trade has occurred.

Other possible causes of slower growth include further reductions in government spending, continued caution in building inventories and even weaker consumer expenditures than assumed in the control forecast. Annual growth of less than 2 percent is unlikely, however.

Optimistically, growth could exceed 3 percent, though 4 percent seems to be the top limit. Each component of GNP conceivably could contribute more (or drag less) than assumed in the control forecast, though trade still is the biggest single wild card.

TABLE 1
1987 ECONOMIC FORECAST: UNITED STATES
(Annual Average Percent)

	Actual *1985*	Projected *1986*	Forecast *1987*
Real Gross National Product	2.7	2.7	2.8
Industrial Production	2.2	1.0	3.0
Housing Starts*	1.7	1.8	1.7
Unemployment Rate	7.1	7.0	6.8
Consumer Price Index	3.6	2.0	3.2
Three-Month Treasury Bill Rate	7.5	6.0	6.0

*Number in Millions

Source: Center for Business Research, College of Business, Arizona State University

1987 ARIZONA FORECAST

Economic expansion maintains a healthy pace in Arizona, though most indicators are registering smaller gains after peaking in 1984. The coming year probably will shape up as the fifth consecutive solid year, with only a few weak sectors.

Population

Population gains support the Arizona economy. Even after downward revision of the number of residents outside Maricopa County (see page 11), the number of new Arizonans set records both in 1985 and 1986. While net in-migration peaked during mid-1985, population increases should remain near the pace experienced between late 1983 and early 1985. This rate translates to another 120,000 Arizonans between mid-1986 and mid-1987.

In Maricopa County, population gains set records in each of the last three years, peaking at 88,000 for the period mid-1985 to mid-1986. While a decline to 80,000 is forecast for mid-1986 to mid-1987, this figure still exceeds those of all but the last two years.

Employment

Job creation moderated further during 1986 from the 1983-84 peak, a natural occurrence in any economic cycle. After the rush to re-employ those who lost jobs during the recession and to add new workers in prep-

aration for the economic expansion, employment has settled down to an equilibrium state with population. As in the mature phases of the economic expansions of the 1970s, employment gains were about 60 percent of population increases in 1985 and 1986. This ratio should be stable through 1987.

The unemployment rate, then, also is in equilibrium. For most of the last two years, it has fluctuated in a narrow band from 6.5 to 7 percent. In the Phoenix area, the rate has remained below 6 percent. The annual average rate for 1987 should stay near the current 7 percent in Arizona and 5.8 percent in Maricopa County.

At the end of each of the last three years, the Arizona Department of Economic Security revised employment estimates upward. A revision, though relatively small, to 1986 data is expected and has been incorporated into the current projections and forecasts. This revision will place employment in better alignment with other data, such as population and personal income. Trade industry employment, in particular, is likely to be adjusted.

The total increase in employment during 1987 probably will be near 70,000, only slightly short of the estimated 1986 gain. Considerable variation exists by sector, however, as shown in Figure I. In particular, construction employment probably will decline, after growing only modestly in 1986.

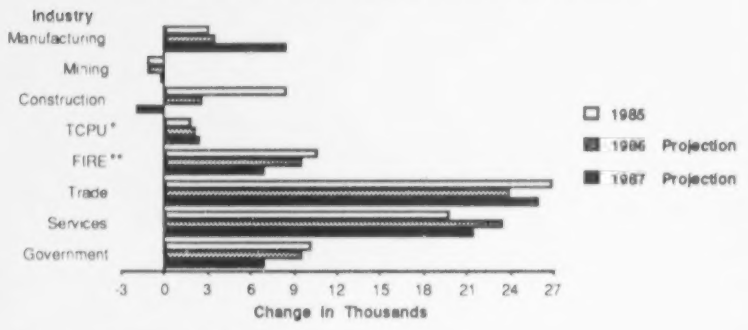
In contrast, manufacturing employment should increase more rapidly in 1987, though still falling short of gains experienced during 1983-84. The trade situation in general, and as it relates to semiconductors and similar products in particular, should at least stop getting worse, if not actually improve.

Job creation in the other industries should not be much different from that during 1985-86. Trade and services will continue to provide the bulk of new jobs; these sectors have created more than one-half of all new jobs throughout this economic expansion. More than two-thirds of the new jobs will continue to be located in Maricopa County.

Personal Income

The 1985 increase in personal income was revised up as expected.

FIGURE I
ARIZONA EMPLOYMENT GROWTH
Non-agricultural Wage and Salary Changes, Year-End



*Transportation, Communications and Public Utilities
**Finance, Insurance and Real Estate

Source: Center for Business Research, College of Business, Arizona State University. Actual data for 1985 are from the Arizona Department of Economic Security.

TABLE 2
1987 ECONOMIC FORECAST: ARIZONA

	Actual 1985	Projected 1986	Forecast 1987
Gross State Product			
Millions of 1982 Dollars	44,473[1]	48,300	51,050
Percent Change	8.5	8.6	5.7
Personal Income			
Millions of Current Dollars	40,775[1]	44,525	48,000
Percent Change	10.4	9.2	7.8
Retail Sales			
Millions of Current Dollars	16,169	17,150	18,350
Percent Change	9.7	6.1	7.0
Unemployment Rate			
Percent	6.5	6.7	6.9
Wage and Salary Employment			
Number in Thousands	1,278	1,353	1,419
Percent Change	8.2	5.9	4.9
Population			
Number in Thousands	3,200[1]	3,332	3,452
Percent Change	4.1	4.1	3.6
New Single Family Housing Units Permitted			
Number	33,271	33,800	32,350
Percent Change	7.8	1.6	-4.3
New Multifamily Housing Units Permitted[2]			
Number	37,312	26,350	16,700
Percent Change	-22.0	-29.4	-36.6
Value of Building Permits			
Millions of Current Dollars	5,449	5,325	4,925
Percent Change	3.5	-2.3	-7.5

[1] Revised
[2] Apartment complexes of three or more units

Source: Center for Business Research, College of Business, Arizona State University

More surprising was the quarterly distribution, which contributed to the upward revision in projected gains during 1986; the 9.2 percent now expected matches the original Center forecast for 1986. With moderate inflation, the result is strong real growth of 6 percent in 1986, not much less than in 1985.

During mature expansions, inflation-adjusted growth in personal income usually is less than the

change in employment; in 1985, the comparison was 6.9 percent to 8.2 percent. While personal income estimates still could be substantially revised, the 1986 real increase may be as large as that of employment. However, the traditional relationship should return in 1987, accounting for the predicted decline in personal income growth.

Gross State Product

In part because of the large personal income gain, the projected increase in real GSP for 1986 is greater than expected, matching the 8.5 percent gain of 1985 and far above the long-term average of 5.7 percent. Normally, during mature expansions, real GSP expands at a rate near that of employment and real personal income. While not far from this relationship in 1985, the difference projected for 1986 has widened.

A sharp decline in the real GSP growth rate is forecast for 1987 (see Table 2), but the 5.7 percent rate would still be higher than anticipated from the personal income and employment forecasts. The GSP deflator consistently has measured lower inflation than other gauges during the 1980s.

Inflation

The inflation outlook is unchanged. Low inflation measured by the Metropolitan Phoenix Consumer Price Index during 1986 should give way to a gradually accelerating rate. By the end of 1987, however, the rate should still be less than the 6 percent measured during 1984 and early 1985. As seen in Figure II, the inflation-unemployment situation will remain much more favorable than in the 1970s and early 1980s.

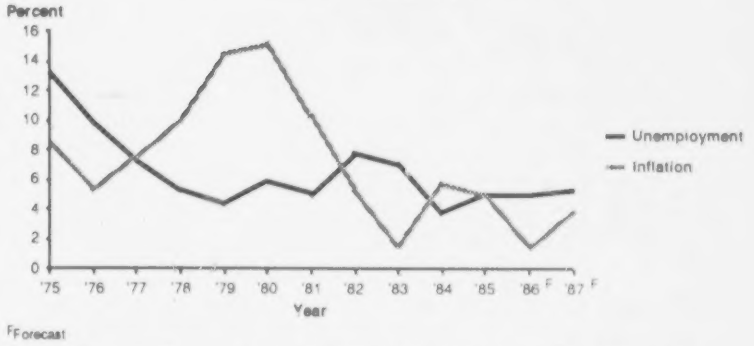
The GSP deflator and the GNP implicit price deflator, frequently used to deflate Arizona personal income, each should accelerate during 1987. These deflators, however, are not as volatile as consumer price indexes; they did not dip as low in 1986 and should remain less than 4 percent on an annual average basis during 1987.

Retail Sales

Forecasts of 1986 retail sales made throughout the year by the Center and by most local forecasters were much too high. The unexpected decline in inflation is largely responsible for lower sales. After adjusting for both population change and inflation, however, the real value of retail sales per person was unchanged during 1986. A slight gain had been anticipated.

With a cutback in consumer purchasing expected nationally, real retail sales per person in Arizona probably will remain flat during 1987. In nominal terms, retail sales should rise more rapidly in 1987 simply because of a higher inflation rate.

FIGURE II
UNEMPLOYMENT AND INFLATION RATES
Maricopa County



FForecast

Source: Center for Business Research, College of Business, Arizona State University

Construction

Construction activity during 1986 was mixed, with residential and miscellaneous construction increasing, while commercial and industrial building declined. Even within the commercial category, some sectors gained, while others dropped. The entire construction industry is likely to slow during 1987, though the rate of slackening will vary by sector. Despite this moderation, a fifth consecutive solid year is forecast.

Bolstered by falling mortgage interest rates, single family housing gained slightly in 1986 from already strong levels. In Maricopa County, approximately 24,000 housing units were permitted, a figure exceeded only in the 1977-78 housing boom. A fifth straight year between 21,000 and 24,000 units permitted is anticipated for 1987 (see Table 3).

The multifamily sector declined again in 1986, dropping to less than 20,000 units permitted, from 28,000 in 1985 and more than 37,000 in 1984. While the slowdown was not as rapid as had been expected one year ago, the pace did slow considerably during the summer. The rate does not need to decelerate much further to result in only 12,000 units permitted next year. With high vacancy rates, a sound single family market and tax law changes in place, the possibility of an even sharper drop during 1987 remains. Historically, however, 12,000 units permitted represented a solid year. With an expected addition of 80,000 residents to the Valley's population during 1987, even a decline to 34,000 total housing units permitted will not reduce high vacancy rates. Thus, the multifamily sector could experience problems for years to come.

Gains in retail and miscellaneous (mostly hotel) commercial construction did not affect the declines in apartment and office building during 1986. All commercial sectors likely will experience less construction in 1987. Likewise, industrial construction, which fell sharply during 1986, should decline further in 1987. This sector's 1985 value was unusually high because of the building of a handful of very large manufacturing plants.

The total construction value in Maricopa County should drop approximately 10 percent in 1987, following a 3 percent decline in 1986. A similar reduction should occur throughout the rest of Arizona. As a result, construction employment should be lower in 1987, after posting a minimal gain for 1986.

Alternative Scenarios

Almost no chance exists of a recession beginning by mid-1987, according to the Arizona Index of Leading Economic Indicators. The probability is not much greater later in 1987. Growth in the index during much of 1986 suggests somewhat improved economic conditions by the end of 1986.

According to the coincident index – the Arizona Trendline – economic growth was vigorous early in 1986 (verified by gains in personal income and GSP), then became erratic through October, the latest month for which data are available, as of this writing December 2. After strong gains during the summer, employment weakened considerably in September and October. These changeable conditions had been signaled by weakness in the leading index during late 1985. Thus, the upturn signaled by the index for the end of 1986 probably does not represent a surge to a higher level of economic activity as much as a return to earlier conditions after weakness in the fall.

Therefore, economic conditions much different from those in the control forecast are unlikely, especially through the summer of 1987. With generally healthy growth already occurring, much better conditions cannot be expected. No indication of impending hard times exists, however. While short cycles of stronger and weaker growth will continue, as they have since mid-1984, a case for significantly variant conditions is difficult to make.

TABLE 3
1987 ECONOMIC FORECAST: MARICOPA COUNTY

	Actual *1985*	Projected *1986*	Forecast *1987*
Consumer Price Index			
Percent Change	5.0	1.5	4.0
Retail Sales			
Millions of Current Dollars	10,830	11,450	12,250
Percent Change	11.2	5.7	7.0
Unemployment Rate			
Percent	5.1	5.4	5.6
Wage and Salary Employment			
Number in Thousands	840	893	938
Percent Change	9.1	6.3	5.0
Population			
Number in Thousands	1,814	1,902	1,982
Percent Change	4.9	4.9	4.2
New Single Family Housing Units Permitted			
Number	23,143	24,000	22,000
Percent Change	11.4	3.7	-8.3
New Multifamily Housing Units Permitted[1]			
Number	27,271	19,200	12,000
Percent Change	-25.9	-29.6	-37.5
Value of Building Permits			
Millions of Current Dollars	4,013	3,900	3,500
Percent Change	5.3	-2.8	-10.3

[1] Apartment complexes of three or more units

Source: Center for Business Research, College of Business, Arizona State University

COMPARISON TO OTHER FORECASTS

For approximately one year, a group of Arizona economists have published their forecasts in the *Arizona Blue Chip Economic Consensus*. In the latest monthly forecast, 12 seers offered a view of 1987. Strong agreement existed, with no one much more optimistic than the consensus and only one or two more pessimistic. Those expecting weaker conditions in 1987 were (and still are) pessimistic about the final numbers for 1986.

Nearly all panelists anticipate personal income rising 7 to 8 percent on a nominal basis, 4 to 5 percent on a real basis, in 1987. They forecast employment gains between 4 and 5 percent, with an unemployment rate between 6.5 and 7 percent. Panelists expect retail sales to grow between 6.5 percent and a little less than 8 percent, with an inflation rate (Metropolitan Phoenix CPI) between 3 and 4 percent. Nearly all look for the number of housing units permitted to decline, though the Center's forecast (-19 percent) is the most pessimistic.

Consensus forecasts generally have proven to be reliable indicators of economic conditions, though the nearly universally unexpected 1981-82 recession proves that blind reliance on such forecasts is unwise. Still, the panel's strong agreement justifies some confidence that surprises during 1987 are unlikely.

CONCLUSION

Stabilization, if not improvement, in the trade deficit should boost industrial production and manufacturing employment during 1987. Improvement in this area should offset weakening elsewhere, particularly in construction and consumer spending. The overall result should be another year of growth similar to that of both 1985 and 1986. These conclusions apply to both the national economy and the Arizona economy.

Caution always is advisable this late in an economic expansion, especially one marked by persistent national imbalances (trade and budget deficits, debt accumulation) and international concerns (particularly with debt repayment). However, signs of a recession are faint. Especially in Arizona, even the chance of a substantial growth slowdown is slim. Rather, given the age of the expansion and the nature of existing problems, a relatively optimistic outlook seems appropriate.

– Tom R. Rex
Research Manager

"Construction," from page 1

Permits issued in Arizona's 12 highest reporting units (Table 4) totaled $1.2 billion in value, 86 percent of the state total; nine of the reporting units are in Maricopa County. Pima County, with 12 percent ($172 million) of the state's activity, recorded an 18 percent decline from one year earlier and a 31 percent drop from the second quarter level. The commercial and industrial sectors in both metropolitan counties are down significantly from one year earlier (see Table 1).

SECTORAL ACTIVITY

Residential

Even though mortgage interest rates continued to decline during the third quarter, the single family sector, with 8,565 permits issued, recorded a 20 percent drop from the 10,655 permits of the second quarter. Even though this sector is not living up to expectations, the year-to-date total of 27,634 permits (26,859 permits for the same period in 1985) heralds a single family sector well on its way to the best year of the 1980s.

Maricopa County recorded 6,093 single family permits, down from 7,565 permits in the second quarter, for a year-to-date total of 19,715 permits. If this sector should continue at its current activity level, it will easily exceed last year's total of 23,143 permits, and 1986 could be the best year since the record year 1978 (30,479 permits). While the number of permits is lower than the second quarter total, the dollar value per permit jumped from $66,200 to $76,270. This increase represents the move-up market's push to acquire more expensive homes.

Pima County issued 1,135 single family permits during the third quarter, a 30 percent decrease from the second quarter number (1,631 permits) but a 28 percent increase from the total one year earlier (882 permits). Unlike Maricopa County, dollar value per permit declined slightly, from $68,100 in the second quarter to $65,404. Nearly 70 percent of the single family permits were issued for projects in unincorporated Pima County, with only 27 percent issued in Tucson.

The non-metropolitan counties followed the pattern of Maricopa County in issuing single family permits, moving from 1,459 permits in the second quarter to 1,337 permits; dollar value per permit increased from $52,200 to $59,600. Active areas of single family development were Lake Havasu City (111 permits) and the unincorporated areas of the following counties: Yavapai (310 permits), Coconino (115 permits), and Cochise (86 permits).

Commercial

During the last several years, the commercial sector has been the main stimulus for the construction industry's sustained, strong level of performance. However, over the last year, the apartment and office building segments have declined significantly in response to concerns about overbuilding and recent tax law changes (see Table 1).

Maricopa County's 4,324 authorized multifamily units represented a decline from 6,413 units in the second quarter. In comparison to the first three quarters of 1985, this period of 1986 shows activity down from 20,293 to 15,645 units, which could be the lowest total since the 9,785 units for the entire year 1982. With 1,168 authorized units, the multifamily sector in Pima County exhibited the same pattern that it did in Maricopa County. In the non-metropolitan counties, however, multifamily activity increased from 80 units in

TABLE 1
KEY SECTOR CONSTRUCTION ACTIVITY
(Third Quarter 1986, Second Quarter 1986, and Third Quarter 1985)

	SINGLE FAMILY		COMMERCIAL						INDUSTRIAL	
			APARTMENTS[a]		OFFICE BUILDINGS[b]		RETAIL STORES[c]			
Maricopa County	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
Third Quarter 1986	6,093	464,714,784	222	123,287,495	63	41,718,467	286	84,855,598	79	32,531,446
Second Quarter 1986	7,565	500,722,396	381	169,921,647	87	53,292,279	414	86,646,380	107	37,291,378
Third Quarter 1985	6,274	435,941,193	376	176,079,383	124	91,485,756	275	65,232,553	171	115,423,175
Pima County										
Third Quarter 1986	1,135	74,233,742	41	30,511,250	22	4,403,474	36	14,699,492	4	348,600
Second Quarter 1986	1,631	111,039,849	57	48,568,040	25	8,699,410	36	12,452,378	8	3,635,996
Third Quarter 1985	885	53,237,603	55	35,886,630	30	49,225,503	21	4,878,165	16	5,306,200
Rest of Arizona										
Third Quarter 1986	1,337	79,675,778	44	15,294,401	41	7,120,817	85	16,134,741	27	3,036,494
Second Quarter 1986	1,459	76,136,192	9	1,693,907	46	5,791,482	73	9,386,329	19	1,088,360
Third Quarter 1985	1,510	73,535,988	72	28,537,404	43	5,533,570	79	6,348,235	31	9,038,026
Arizona Total										
Third Quarter 1986	8,565	618,624,302	307	169,093,146	126	53,242,758	407	115,689,831	110	35,916,540
Second Quarter 1986	10,655	687,898,437	443	220,183,594	158	67,783,171	523	108,485,087	134	42,015,734
Third Quarter 1985	8,905	577,172,596	503	240,503,417	197	146,244,829	375	76,458,953	218	129,767,401

[a] Five or more housing units

[b] Office, bank, medical and professional buildings

[c] Shopping centers and other mercantile buildings

Source: Center for Business Research, College of Business, Arizona State University

the second quarter to 640 units. The primary areas of multifamily development were Yuma (202 units), Kingman (144 units), Clarkdale (56 units), and unincorporated Yavapai County (54 units).

The most publicized commercial construction sector in the metropolitan counties over the last few years has been the office building segment. First, its record construction levels drew attention, then its record vacancy rates. In response to the concern about vacancies, development activity has declined. In Maricopa County, this sector has moved from permits valued at $91 million (124 permits) during third quarter 1985 to $42 million (63 permits). It appears that this sector may record its lowest level of activity since 1982's 404 permits, valued at $166 million, with a 1986 year-to-date total of $177 million (237 permits). With a decrease from $49 million (30 permits) for third quarter 1985 to the current level of $4.4 million (22 permits), Pima County's office building segment is responding to concerns similar to those in Maricopa County. Again, contrary to activity in the metropolitan counties and like the multifamily segment, office building activity increased in the non-metropolitan counties (see Table 1). However, only one project permit exceeded $1 million in value (Kingman City – $2.3 million).

The only consistently strong sector of commercial development has been the retail segment. Based on the $85 million (286 permits) of the third quarter, year-to-date retail activity in Maricopa County already totals $246 million (957 permits), in contrast to 985 permits ($257 million) in the record year 1985.

Pima County also had a good quarter, with activity valued at $15 million (36 permits), but is not near its 1981 record of $96 million (185 permits). The retail sector has been fairly strong in the non-metropolitan counties as well. Valued at $16 million, the 85 permits include projects in Benson (1 permit at $2.6 million), Flagstaff (7 permits at $1.4 million), Kingman City (4 permits at $2.6 million), Lake Havasu City (2 permits at $1.1 million), and Apache Junction (3 permits at $2.6 million).

Although lacking the consistent level of activity of the retail sector, Arizona's hotel/motel sector already has established a record year. Permits were valued at $129 million (4,000 rooms) in the first quarter, $16.5 million (900 rooms) in the second quarter, and $37 million (1,900 rooms) in the third quarter. Leading areas of third quarter activity were Flagstaff (157 rooms at $3.6 million), Phoenix (70 rooms at $1 million), and Scottsdale (166 rooms at $5 million).

Industrial

This sector posted a statewide decline of 75 percent, from $130 million (218 permits) during third quarter 1985 to the third quarter 1986 level of $36 million (79 permits). Most of the decline occurred in Maricopa County, which moved from $115 million (171 permits) to $33 million (79 permits). The primary reason for this decline is the absence of the single-user, large-dollar-value structure, which was so prevalent in last year's industrial activity. In 1985, 5 permits accounted for $80 million of the annual total ($308 million). So far in 1986, a total of $120 million in industrial permits have been issued, which is barely more

TABLE 2
ARIZONA HOUSING UNITS AUTHORIZED
Third Quarter 1986

	One Family	*Mobile Homes*	*Duplex*	*3-4 Family*	*5 or More*	*Total*
APACHE COUNTY	32	24	0	0	0	56
Percent Change, Previous Year	39	41	–	0	–	39
Percent Change, Previous Qtr.	-13	139	–	0	–	19
COCHISE COUNTY	102	97	2	0	24	225
Percent Change, Previous Year	10	14	–	0	19	14
Percent Change, Previous Qtr.	47	116	-75	–	–	78
COCONINO COUNTY	216	125	8	0	38	389
Percent Change, Previous Year	-17	-14	0	0	–	-7
Percent Change, Previous Qtr.	0	0	33	0	137	8
GILA COUNTY	82	66	0	0	0	148
Percent Change, Previous Year	-7	112	0	–	–	12
Percent Change, Previous Qtr.	1	1	–	–	0	-1
GRAHAM COUNTY	7	53	0	0	0	60
Percent Change, Previous Year	-64	10	0	–	0	-16
Percent Change, Previous Qtr.	-63	-5	0	0	0	-19
GREENLEE COUNTY	1	0	0	0	0	1
Percent Change, Previous Year	0	0	0	0	0	0
Percent Change, Previous Qtr.	0	0	0	0	0	0
LA PAZ COUNTY	0	0	0	0	0	0
Percent Change, Previous Year	–	–	–	–	–	–
Percent Change, Previous Qtr.	–	–	–	–	–	–
MARICOPA COUNTY	6,083	328	98	199	4,324	11,042
Percent Change, Previous Year	-2	-37	-35	-13	-26	-15
Percent Change, Previous Qtr.	-19	-14	-29	24	-32	-24
MOHAVE COUNTY	235	235	2	44	202	718
Percent Change, Previous Year	32	-42	0	1,366	494	14
Percent Change, Previous Qtr.	23	-3	0	1,000	–	63
NAVAJO COUNTY	127	29	2	0	24	181
Percent Change, Previous Year	-27	-81	0	–	0	-48
Percent Change, Previous Qtr.	8	-6	–	–	–	7
PIMA COUNTY	1,135	256	30	252	1,168	2,841
Percent Change, Previous Year	1	-54	-37	739	-5	-5
Percent Change, Previous Qtr.	-30	-50	88	1,392	-32	-27
PINAL COUNTY	108	233	6	6	0	383
Percent Change, Previous Year	2	23	-76	-79	–	-59
Percent Change, Previous Qtr.	-33	8	-25	50	0	-10
SANTA CRUZ COUNTY	34	2	0	0	0	36
Percent Change, Previous Year	25	-98	–	–	–	-55
Percent Change, Previous Qtr.	100	-50	–	–	–	-2
YAVAPAI COUNTY	419	108	8	30	150	713
Percent Change, Previous Year	48	-59	-55	-47	177	5
Percent Change, Previous Qtr.	-3	-43	-71	3	134	-3
YUMA COUNTY	66	90	0	0	202	367
Percent Change, Previous Year	-60	-19	–	–	-52	-50
Percent Change, Previous Qtr.	-30	-20	–	–	–	72
TOTAL, ARIZONA	8,868	1,843	156	831	6,132	17,120
Percent Change, Previous Year	-1	-37	-39	39	-25	-15
Percent Change, Previous Qtr.	-18	-17	-31	140	-25	-19

Note: A dash indicates that a percent change could not be calculated because at least one period had no activity.

Source: Center for Business Research, College of Business, Arizona State University

than the $115 million reported in just the third quarter of 1985.

Industrial development in Pima County did not even reach a third quarter total of $1 million, with just 4 permits issued ($348,600). The nonmetropolitan counties' decline from $9 million (31 permits) in third quarter 1985 to $3 million (27 permits) still represents an increase from the $1 million of the second quarter (19 permits). As is typical in the nonmetropolitan counties, the permitted activity represented fairly small projects, such as those in Flagstaff (3 permits at $432,000), the Kingman area (1 permit at $462,733), Cooldige (1 permit at $240,000), Cottonwood (5 permits at $454,307), and unincorporated Yuma County (5 permits at $1 million).

Other

This sector is composed of many unrelated private and public areas of construction activity. Most frequently permitted were educational facilities, with a statewide total of $56 million (66 permits). The year-to-date total of $150 million (180 permits) means that the permits granted for educational facilities just through third quarter 1986 have a higher value than those granted for all of 1985 (196 permits valued at $104 million). For the third quarter, active areas included Yuma (6 permits at $5 million), unincorporated Pima County (3 permits at $4.5 million), Tempe (5 permits at $6.5 million), Mesa (6 permits at $17.5 million), and Chandler (18 permits at $11.8 million).

TABLE 3
ARIZONA BUILDING PERMITS
Third Quarter 1986

	Residential*		Commercial		Industrial		Other		Total	
	Number of Permits	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*	*Number of Permits*	*Dollar Value*
APACHE COUNTY	70	1,846,100	2	6,000	0	0	11	1,293,445	83	3,145,545
Percent Change, Previous Year	25	58	-33	-96	0	0	175	–	31	136
Percent Change, Previous Qtr.	1	-15	-71	-97	0	0	83	906	1	22
COCHISE COUNTY	380	8,370,418	9	3,539,937	3	215,000	176	4,276,728	568	16,402,083
Percent Change, Previous Year	20	31	-18	-53	-25	-16	-48	-11	-15	-13
Percent Change, Previous Qtr.	30	67	-43	79	50	688	4	160	23	92
COCONINO COUNTY	615	17,883,718	26	6,463,386	4	507,000	142	3,474,127	787	28,328,231
Percent Change, Previous Year	-7	0	225	134	0	-6	-11	-65	-5	-9
Percent Change, Previous Qtr.	17	13	62	16	100	641	-1	-47	15	1
GILA COUNTY	312	6,056,234	11	519,287	1	2,000	47	1,781,689	371	8,358,210
Percent Change, Previous Year	31	28	9	-60	0	-86	17	52	28	15
Percent Change, Previous Qtr.	15	3	0	-11	-66	-95	2	184	12	17
GRAHAM COUNTY	104	1,380,445	11	362,500	0	0	17	98,115	132	1,841,060
Percent Change, Previous Year	-18	-17	9	164	–	–	-31	-96	-19	-60
Percent Change, Previous Qtr.	-14	-32	119	136	0	0	6	167	-7	-17
GREENLEE COUNTY	7	25,000	0	0	0	0	2	1,300	9	26,300
Percent Change, Previous Year	600	66	0	0	0	0	0	-84	200	13
Percent Change, Previous Qtr.	75	12	0	0	0	0	100	-96	79	-51
LA PAZ COUNTY	13	29,107	2	116,000	0	0	31	39,358	46	184,465
Percent Change, Previous Year	-78	-96	-33	-58	0	0	-24	-87	-55	-86
Percent Change, Previous Qtr.	8	1	100	169	0	0	933	248	187	122
MARICOPA COUNTY	8,171	486,425,862	815	313,799,018	79	32,531,446	6,444	182,565,850	15,509	1,015,321,976
Percent Change, Previous Year	-6	5	-9	-19	-53	-71	-8	34	-7	-7
Percent Change, Previous Qtr.	-17	-9	-15	-5	-26	-12	-20	3	-18	-4
MOHAVE COUNTY	990	20,018,930	44	14,007,439	3	490,833	259	3,821,288	1,296	38,338,490
Percent Change, Previous Year	22	72	-22	356	-25	-68	-37	153	1	117
Percent Change, Previous Qtr.	2	42	69	382	-25	72	-39	105	-9	100
NAVAJO COUNTY	261	7,708,510	7	970,692	1	57,600	158	909,425	427	9,646,217
Percent Change, Previous Year	-44	10	-41	-13	0	-17	56	45	-27	9
Percent Change, Previous Qtr.	-17	8	-61	55	-50	-80	102	10	2	9
PIMA COUNTY	2,178	79,531,105	112	53,902,745	4	348,600	1,486	38,367,103	3,780	172,149,553
Percent Change, Previous Year	-23	7	-9	-46	-75	-93	-3	18	-16	-18
Percent Change, Previous Qtr.	-26	-31	-15	-31	-50	-90	-20	-29	-23	-31
PINAL COUNTY	456	9,481,348	25	8,073,994	3	290,540	215	2,831,196	699	20,677,067
Percent Change, Previous Year	16	21	-58	-55	-25	-82	-36	8	-11	-31
Percent Change, Previous Qtr.	-9	-11	56	261	–	–	-29	-9	-14	29
SANTA CRUZ COUNTY	45	2,369,878	2	26,500	0	0	9	89,280	56	2,485,658
Percent Change, Previous Year	-42	71	100	-56	–	–	125	233	-33	14
Percent Change, Previous Qtr.	21	51	0	-93	–	–	-25	-78	7	2
YAVAPAI COUNTY	770	30,086,253	58	7,362,811	7	518,029	247	4,317,637	1,082	42,274,730
Percent Change, Previous Year	5	61	48	-44	16	-57	2	2	6	13
Percent Change, Previous Qtr.	-12	-4	26	46	133	240	-43	50	-20	6
YUMA COUNTY	229	5,493,125	38	7,642,375	5	955,492	148	8,393,391	419	23,484,381
Percent Change, Previous Year	-31	-45	-47	-54	0	-66	28	48	-20	-37
Percent Change, Previous Qtr.	-27	-28	79	49	150	1,198	-6	251	-15	41
TOTAL, ARIZONA	14,601	677,724,831	1,160	416,782,664	110	36,916,540	9,392	252,239,931	25,263	1,382,663,966
Percent Change, Previous Year	-7	8	-10	-24	-49	-72	-9	24	-9	-8
Percent Change, Previous Qtr.	-14	-8	-6	-4	-17	-14	-19	0	-16	-5

*Includes mobile homes

Note: A dash indicates that a percent change could not be calculated because at least one period had no activity.

Source: Center for Business Research, College of Business, Arizona State University

Development activity in the area of health care facilities throughout Arizona has already exceeded last year's total value, moving from $61 million (48 permits) to $68 million (36 permits) in third quarter 1986. Health care facilities construction was evident in Springerville (1 permit at $1.2 million), Flagstaff (1 permit at $1.8 million), Phoenix (5 permits at $4.8 million), Chandler (2 permits at $9.7 million), and Bullhead City (1 permit at $2.3 million).

LOOKING AHEAD

Construction activity, like general economic activity in Arizona, has been good but unspectacular during 1986. The industry has not performed with the elan of the last few years. This "dullness" can be attributed to the lack of dominance by any specific segment, such as multifamily housing or office buildings.

Development of new office buildings, especially the high-rises in Maricopa and Pima Counties, was a visible expression of a strong real estate market. Now, the market is vexed with concern about the future potential of all elements of the commercial sector. Further, the current active areas of development – hotel/motels, retail (mostly small centers), and educational facilities – do not have the broad-based impact that creates confidence in the future real estate market. The fundamental strength of the 1986 construction industry has not been as evident as in the past.

There is strength, however, in realistic levels of activity that can be sustained in a slower economic environment. Because no major sector is expected to grow in 1987 over 1986, total construction activity will decline during the forthcoming year. The slowdown will be most evident in multifamily housing in the metropolitan areas as development adjusts to reduced demand and the new tax law. The office building segment, with major projects in the pipeline, could sustain its current level of activity. Because many local industrial companies are facing strong foreign competition, there is no reason to expect improvement in the industrial sector during 1987.

Mortgage interest rates are not expected to significantly increase during 1987. Hence, current single family development should remain stable. Lower rates are sustaining the market, not stimulating it. Since the new home market in Maricopa County is so competitive, homebuyers, especially the move-up market, should find a wide range of "products" at very affordable financial terms.

When construction activity slows in the metropolitan counties, it tends to pick-up in the non-metropolitan areas. Frequently, these markets are overlooked in an attempt to fulfill the growing needs of Pima and Maricopa Counties. While they may improve, the non-metropolitan markets are not at levels comparable to the metropolitan markets, nor are they strong enough to sustain the statewide construction totals. In 1986, the apartment, retail and office building sectors improved. It must be recognized that these markets are small. Hence, they lack the depth to maintain increasing levels of development activity for any lengthy period of time.

The current construction year will be a good one, with activity in the segments of retail, hotel/motel, and educational facilities near or already surpassing previous records. However, concerns are increasing about the future potential of the economy and construction activity. Hence, construction activity in 1987 is expected to decline, though not dramatically, to end the year at a level slightly below 1986.

TABLE 4
REPORTING UNITS WITH GREATEST TOTAL VALUE OF BUILDING PERMITS
Third Quarter 1986

Reporting Unit	Value *(in millions)*
Phoenix	$300.5
Mesa	179.6
Scottsdale	144.8
Chandler	95.2
Unincorporated Pima County	85.2
Tempe	84.1
Unincorporated Maricopa County	81.3
Tucson	79.9
Glendale	50.3
Peoria	38.7
Gilbert	29.1
Unincorporated Yavapai County	24.9

Source: Center for Business Research, College of Business, Arizona State University

– Jay Q. Butler

Dr. Butler is Associate Professor of Real Estate and Director of the Arizona Real Estate Center in the ASU College of Business.

'87 Economic Outlook Survey

Arizona's Small Businesses More Optimistic Than Large Firms

Small business managers are slightly more optimistic than large employers on the national economic outlook for real growth during 1987, according to surveys of Arizona private employers conducted by the Center for Business Research. The most frequent response for both groups indicated an expectation of national growth at approximately the same below-average rate experienced in 1986 (see Figure I).

THE SURVEYS AND RESULTS

The Center conducted both surveys during the first week of November 1986. One set of survey forms was circulated to the chief executives of Arizona's 100 largest employers. This size classification includes key manufacturers whose output constitutes the primary link between the Arizona economy and national/international markets. Large firms make up less than 1 percent of the state's businesses, yet they provide employment for more than 40 percent of the labor force – some 500,000 Arizona workers (based on unpublished data made available through the Arizona Department of Economic Security).

The Center mailed another set of survey forms to 225 owners and managers of small private businesses in the state, randomly selected

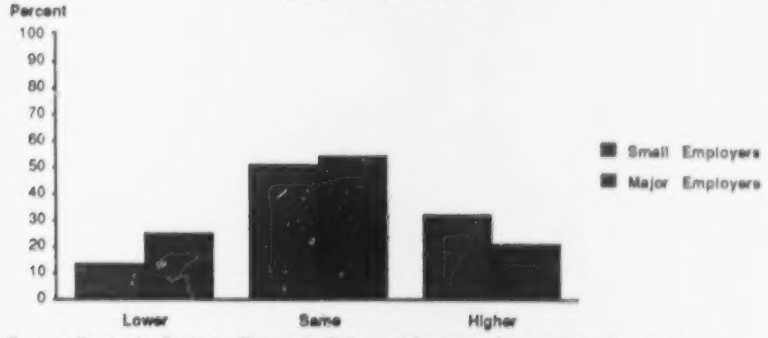
from commercial telephone listings. Of 71,988 businesses in Arizona at the beginning of 1986, 99 percent met the Small Business Administration's definition of a small business, employing fewer than 250 people. Nine out of 10 Arizona firms employ fewer than 50 workers.

The questions asked large employers were identical to those asked the small firms. They dealt with the businessperson's economic outlook for 1987. The results in two categories follow:

Hiring Plans

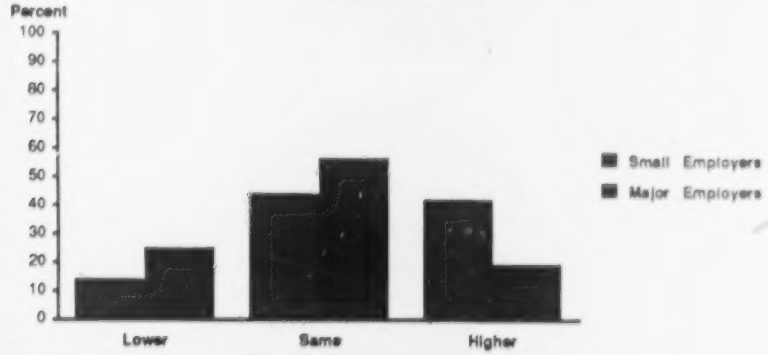
Small business's hiring plans for 1987 reflect a growth orientation, with 42 percent of respondents anticipating faster-paced job creation in 1987 than in 1986; only about one in seven expects to hire at a reduced rate. Of major employers, however, one in four said they will hire fewer workers in 1987 than in 1986. Still, most major employers foresee new job opportunities in 1987 similar to the level of 1986. Since they are subject to national economic factors, their hiring plans tend to be influenced by their outlook for real national growth (compare Figures I and II).

FIGURE I
ECONOMIC OUTLOOK FOR 1987 NATIONAL REAL GROWTH, COMPARED TO 1986



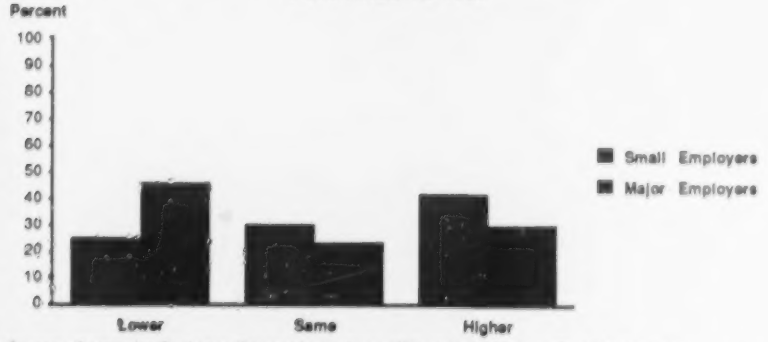
Source: Center for Business Research, College of Business, Arizona State University

FIGURE II
OUTLOOK FOR 1987 HIRING, COMPARED TO 1986



Source: Center for Business Research, College of Business, Arizona State University

FIGURE III
OUTLOOK FOR 1987 CAPITAL SPENDING, COMPARED TO 1986



Source: Center for Business Research, College of Business, Arizona State University

'87 Capital Expenditures

The optimism of small employers is evident again in their capital expenditure plans for 1987, with 42 percent expecting to spend at a pace exceeding that of 1986. While a majority of major employers report hiring plans for 1987 similar to those of 1986, only one in four will undertake capital spending during 1987 similar to that of 1986. Most major employers are planning to reduce capital spending in 1987, but an additional 30 percent are planning to spend more (see Figure III).

GENERAL OUTLOOK

A dichotomy between the expansion plans of large and small employers sharply illustrates the differential effects of national and local markets. Large manufacturing employers are subject to national and, in many cases, international market conditions and competitive forces. Hence, their economic outlook for 1987 is much more uncertain than that of the small businesses oriented to the more vigorous Arizona economy. In many cases, larger firms have available capacity and are contemplating selective modernization, rather than the expansion of physical plant that smaller businesses are planning. Small employers, one-third in the services sector, will be a strong source of capital spending and new job creation in 1987, provided in-migration continues to stimulate local markets, and public policy encourages a strong Arizona business climate.

– Lee R. McPheters

Dr. McPheters is Professor of Economics and Director of the Center for Business Research. *He gratefully acknowledges the research assistance of Martha Clyde.*

Metropolitan Growth Masks Trouble Elsewhere in Arizona

Tremendous growth has occurred in Arizona's metropolitan areas, particularly the Phoenix area, since the end of the last recession in late 1982. Because the Phoenix and Tucson areas account for 83 percent of the state's employment and 76 percent of its population, the aggregate numbers for Arizona also show rapid growth. Yet expressions such as "boom" hardly apply to most of the non-metropolitan areas; in some cases, "depressed" is a more appropriate term.

EMPLOYMENT

In June 1986, 243,500 more people were working in Maricopa County than in June 1980, an increase of 35 percent. During the same period, the county's unemployment rate fell to the lowest level in the state (see Table 1). More than 63 percent of the state's employment was located in metropolitan Phoenix in 1986. This area's share of the state's employment growth between 1980 and 1986 was even greater – 72 percent.

New job creation varied widely throughout the rest of Arizona. The percent increase in the Tucson area exceeded the rate in the Phoenix area, while employment growth in Mohave and Cochise counties was not far behind. Of the remaining counties, however, only Yavapai's employment rose by more than a minimal amount. Even though June 1980 marked the midst of a recession, in which employment was depressed, employment *declined* in six counties between June 1980 and June 1986. Outside the two metropolitan areas, the net increase in employment amounted to a paltry 4.5 percent during this six-year period.

As would be expected from the dismal employment gain, the unemployment rate in the non-metropolitan counties jumped from 9.2 percent in June 1980 (already high, due to the recession) to 14.5 percent in June 1986. The rate declined only in Yavapai and Cochise counties.

TABLE 1
EMPLOYMENT AND UNEMPLOYMENT

	Total Employment (In Thousands)			Unemployment Rate (In Percent)		
	June 1980	*June 1986*	*Percent Change*	*June 1980*	*June 1986*	*Change*
Apache	13.7	11.9	-13.1	19.1	23.2	4.1
Cochise	25.5	33.1	29.8	9.4	7.8	-1.6
Coconino	34.1	35.7	4.7	7.7	11.5	3.8
Gila	14.8	10.7	-27.7	8.7	14.9	6.2
Graham	7.1	6.9	-2.8	10.1	11.5	1.4
Greenlee	4.8	2.6	-45.8	4.1	9.2	5.1
Maricopa	695.1	938.6	35.0	6.7	5.2	-1.5
Mohave	19.6	25.1	28.1	7.5	9.2	1.7
Navajo	22.6	22.2	-2.6	14.5	18.2	3.7
Pima	206.6	290.8	40.8	6.6	5.4	-1.2
Pinal	29.5	30.2	2.4	8.4	12.2	3.8
Santa Cruz	7.4	8.0	8.1	13.4	15.9	2.5
Yavapai	27.9	31.7	13.6	7.0	6.7	-0.3
Yuma*	32.7	32.6	-0.3	12.8	27.0	14.2
Non-metropolitan	239.9	250.6	4.5	9.2	14.5	5.3
Arizona	1,141.6	1,480.0	29.6	7.5	6.9	-0.6

*Combines Yuma and La Paz counties; La Paz County was created from the original Yuma County on January 1, 1983.

Source: Arizona Department of Economic Security

TABLE 2
POPULATION ESTIMATES
(In Thousands)

	1970 Census	1980 Census	1986 Estimate*	Average Annual Change 1970-80	Average Annual Change 1980-86
Apache	32.3	52.1	58.0	1.9	1.0
Cochise	61.9	85.7	96.0	2.4	1.7
Coconino	48.3	75.0	89.0	2.7	2.3
Gila	29.3	37.1	40.0	.8	.4
Graham	16.6	22.9	25.0	.6	.3
Greenlee	10.3	11.4	10.0	.1	-.2
La Paz	NA	12.6	14.0	NA	.2
Maricopa	971.2	1,509.3	1,902.0	53.8	65.5
Mohave	25.9	55.9	77.0	3.0	3.4
Navajo	47.6	67.6	74.0	2.0	1.0
Pima	351.7	531.4	643.0	18.0	18.6
Pinal	68.6	90.9	104.0	2.2	2.1
Santa Cruz	14.0	20.5	24.0	.7	.6
Yavapai	37.0	68.1	90.0	3.1	3.7
Yuma	NA	76.2	88.0	NA	2.0
Non-metropolitan	452.5	675.9	787.0	22.3	18.6
Arizona	1,775.4	2,716.6	3,332.0	94.1	102.6

NA: Not available; La Paz County was part of Yuma County prior to 1983.

*As of July 1; census counts as of April 1.

Source: U. S. Bureau of the Census (1970 and 1980) and Center for Business Research, College of Business, Arizona State University (1986). The 1986 estimates are based largely on work by the Arizona Department of Economic Security, Population Statistics Unit, but are not the state's official population estimates.

POPULATION

In Maricopa County, the average annual increase in population during the 1980s – 65,500 – has been more than 20 percent greater than the 53,800 average of the 1970s (see Table 2). Maricopa County's share of the state's population has grown steadily, reaching 57 percent in 1986. Its share of population change is greater, at 64 percent during the 1980s. In terms of net migration (the primary cause of Arizona's

population gains), more than two of every three people who move to the state settle in metropolitan Phoenix, comparable to the area's share of employment growth.

Rural Counties

In Arizona's non-metropolitan counties, the average annual change in population has been 17 percent *less* during the 1980s than in the 1970s. Only two counties – Mohave and Yavapai – experienced faster annual growth from 1980-86 than from 1970-80. Both counties receive considerable retirement in-migration. Mohave County's growth has been further stimulated by the development of the gambling industry in Laughlin, Nevada.

One county – Greenlee – lost population between 1980 and 1986, due to the scaleback of mining operations in Clifton/Morenci. Two other counties – Apache and Navajo – suffered from net out-migration, but net natural increase caused their populations to grow nonetheless. Movement by Indian residents away from each county contributed to the net out-migration.

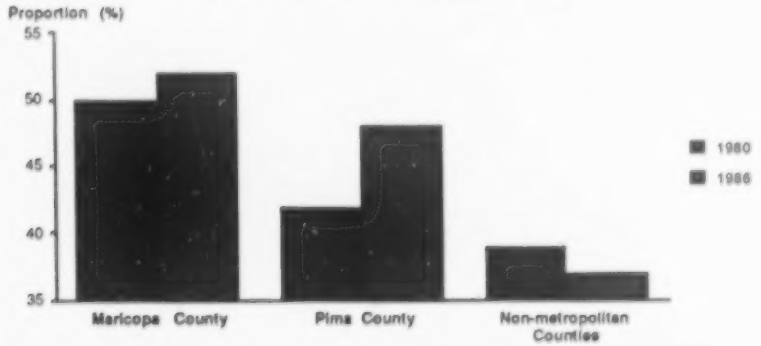
Pima County

Demographic and economic information for the Tucson metropolitan area indicate varying amounts of growth during the 1980s. The special census conducted in 1985 indicates that the population rose approximately one-half as fast as in the Phoenix metropolitan area, slower than expected by most demographers and economists. This relatively slow growth seems to be verified by other demographic measures, such as new housing units constructed and migration data from the Internal Revenue Service.

The special census still is under appeal, however. A substantial undercount may have occurred. Thus, Pima County's estimated annual population gain between 1980 and 1986 is higher than shown by the special census – slightly more than the average between 1970 and 1980.

Even faster population growth is indicated by employment and labor force data, which rose more rapidly than in any other county between 1980 and 1986. The labor force-to-population ratio rose sharply during a period when this proportion was relatively constant in most other areas (see Figure I). If the actual population is lower than the 643,000 estimated – a strong case can be built for a population near 615,000 – then this ratio increased even more rapidly.

FIGURE I
LABOR FORCE TO POPULATION RATIO



Source: Center for Business Research, College of Business, Arizona State University

POPULATION PROJECTIONS

The geographic disparity of population growth during the last several years raises questions regarding the magnitude and distribution of growth in coming years. More than one-half of Arizona's population growth results from employment-related net migration. The magnitude of this migration depends on several factors: demographics; the vitality of the Arizona economy; the economic health of rival states, such as California and Texas; and the national economic cycle.

Demographically, most of this migration involves young adults, particularly those in their 20s and early 30s. Because of the aging of the baby-boom generation, which was followed by the "baby bust," the national population in this age group will decline during the 1990s and into the 21st century. Therefore, the supply of potential migrants to Arizona will decline.

Economically, the disappearance of the business cycle is highly unlikely. Further, economic growth nationally should slow in response to less labor force growth – largely the result of a smaller young adult population. Given these conditions, it is difficult to build a case in which average long-term growth of the Arizona

TABLE 3
POPULATION PROJECTIONS
In Thousands

	1980	1990			2000			2010		
	Census	*Low*	*Middle*	*High*	*Low*	*Middle*	*High*	*Low*	*Middle*	*High*
Maricopa	1,509	2,150	2,220	2,260	2,800	2,960	3,250	3,460	3,710	4,050
Pima	531	710	720	730	890	950	970	1,070	1,220	1,260
Non-metropolitan	677	870	870	870	1,070	1,070	1,080	1,280	1,290	1,340
ARIZONA	2,717	3,730	3,810	3,860	4,760	4,980	5,300	5,810	6,220	6,650

Source: Center for Business Research, College of Business, Arizona State University

economy would be more spectacular than it was during the last 15 years.

Thus, unless economic conditions worsen in competing states, prompting more migrants to move to Arizona, the state should grow less rapidly after the late 1980s.

Scenarios

In contrast, some population projections assume consistently more employment-related net migration than experienced during the record 1984-86 period; these numbers are displayed as the "high" scenario in Table 3.

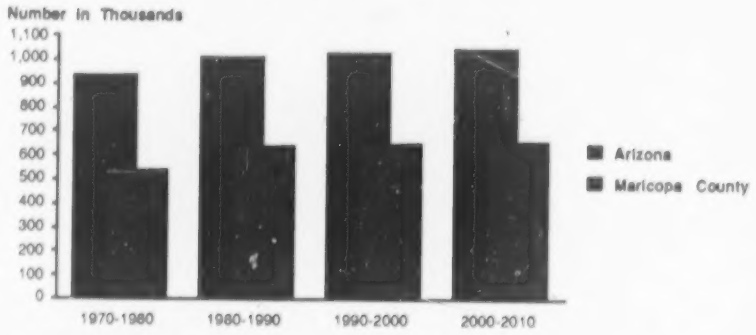
The "low" scenario assumes no change in economic conditions from those prevailing between 1970 and 1986 and strictly adheres to demographic changes caused by the aging population. It provides projections not much higher than the consensus reached in the July/August 1986 *Arizona Business*, page 1.

The "middle" scenario allows the population to rise more rapidly than in the "low" scenario while still maintaining demographic controls on the speed of the growth. It produces higher projections because it assumes that Arizona will do somewhat better competitively (though not as well as in the peak years), mainly because the economies of Texas and other energy-producing states probably will not again do as well as they did between the early 1970s and early 1980s.

Metropolitan v. Rural Growth

Each of the projections assumes that the urban areas will continue to grow much more rapidly than the non-metropolitan counties. The attraction of non-urban areas was a brief phenomenon that did not persist into the 1980s. Economic opportunity, the most important migration motivator, is not sufficient in most rural areas to attract many working adults. Thus, growth in most outlying areas is likely to remain slow.

FIGURE II
POPULATION CHANGE



Note: Projections use "low" scenario.

Source: U.S. Department of Commerce, Bureau of the Census, and the Center for Business Research, College of Business, Arizona State University

CONCLUSION

Despite hundreds of miles of sparsely settled countryside, Arizona is becoming a highly urbanized state. By the end of the century, nearly 80 percent of the state's population will reside in the two metropolitan areas, with approximately 60 percent in metropolitan Phoenix alone.

While the slump that has afflicted many of Arizona's rural areas during the 1980s should moderate, a return to the more rapid growth of the early-to-mid 1970s is unlikely. Many areas still are highly dependent on agriculture and mining, which have been primarily responsible for the depressed conditions. Neither holds much promise for the future.

Meanwhile, the urban areas, particularly Phoenix, continue to grow at rates among the fastest in the nation. No one disagrees that each area will continue to grow rapidly; only the rate of growth is in question. Even under the "low" growth scenario, the total population change for each decade through 2010 will be minimally greater than the change in the preceding decade (see Figure II). Net natural increase and non-employment-related migration will push the population ever higher.

– Tom R. Rex
Research Manager

Population Model

The Center's population model (see January 1986 *Arizona Business*) depends on information specific to Maricopa County. By accurately estimating the 1985 special census count, it proved its reliability for Maricopa County.

Estimates of the state's population, however, were based on the assumption that the rest of the state would continue to grow only slightly slower than Maricopa County, as during the 1970s. The information presented in this article clearly indicates that this is not a reasonable assumption; the previously published estimate of the July 1, 1986, population was 48,000 people higher than the 3.332 million figure shown in Table 2.